UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,863	11/15/2001	Ivan J. Leichtling	212630	4785

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EXAMINER
RIVERO, MINERVA

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2"><i>Office Action Summary</i></td><td colspan="2">Application No.
10/002,863</td><td colspan="2">Applicant(s)
LEICHTLING ET AL.</td></tr>
<tr><td colspan="2">Examiner
Minerva Rivero</td><td>Art Unit
2655</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/15/2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-2, 4-9, 12, 14-15, 17-22 and 25 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* (US

Patent 6,665,283).

3.   Regarding claims 1 and 14, Borella *et al.* disclose a method of and computer

readable medium for

adding incoming packets of audio data to a buffer in an order generated (*data

packet sequence*, Col. 6, Line 66 – Col. 7, Line2);

detecting when the buffer contains an amount of audio data which matches a

predetermined threshold amount (*determining whether the buffer is full*, Col. 13, Lines

39-41; Fig. 9, element 1502) and

detecting when a burst has ended (*talk spurt*, Col. 15, Lines 57-63).

However, Borella *et al.* do not explicitly disclose but Harris *et al.* do disclose

playing the audio data contained in the buffer either when the buffer contents

have reached said predetermined threshold, or when a burst has ended (Col. 1, Lines

41-48).

Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the teachings of Borella *et al.* with playing the audio

contents in the buffer either when the buffer contents have reached said predetermined

threshold, or when a burst has ended, as taught by Borella *et al.* in order to avoid losing

audio data due to a full buffer. [Note: Claim is written in the alternative].

4.   Regarding claims 2 and 15, Borella *et al.* do not explicitly disclose but Harris *et

al. do disclose

each of said bursts includes an end packet, wherein the step of detecting when a

burst has ended comprises detecting an end packet (*end of talk spurt is detected*, Col.

11, Lines 5-9).

Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the teachings of Borella *et al.* with having each of

the bursts include an end packet and wherein the step of detecting when a burst has

ended comprises detecting an end packet, as taught by Harris *et al.* so as to enable the

buffering process by positively identifying speech packets.

5.   Regarding claims 4 and 17, Borella *et al.* further disclose

periodically adjusting the threshold (*periodic evaluation of jitter buffers and*

alternation of jitter buffer used, Col. 6, Lines 57-65; Col. 10, Lines 62-65).

6.   Regarding claims 5 and 18, Borella *et al.* further disclose

periodically measuring at a length of a burst; and resetting the threshold to as a

factor of the length of the most recently measured burst (Col. 11, Lines 27-32; Col. 17,

Lines 25-26; *sensitivity settings*, Col. 19, Lines 18-28; *using first or second order*

statistics in a buffer selection scheme, Col. 19, Lines 41-53; *burst basis*, Col, 19, Lines

29-40).

7.   Regarding claims 6 and 19, Borella *et al.*, further disclose

measuring respective jitter times between packets received during a current

sample period to determine a measured jitter amount (*burst basis* and *current delay*,

Col. 19, Lines 29-40; *variation of delay*, Col. 19, Lines 42-51);

calculating an adjusted threshold time as a factor of the measured jitter amount

(Col. 11, Lines 27-32; Col. 17, Lines 25-26; *sensitivity settings*, Col. 19, Lines 18-28;

using first or second order statistics in a buffer selection scheme, Col. 19, Lines 41-53;

burst basis, Col, 19, Lines 29-40); and

resetting the threshold to the adjusted threshold time to be applied during a

subsequent sampling period (*computationally-desirable jitter buffer* and *subsequent talk*

spurt, Col. 15, Lines 43-56; *resetting jitter buffer*, Col. 11, Lines 24-32).

8.   Regarding claims 7 and 20, Borella *et al.* disclose

each sampling period is one of said bursts (*burst basis*, Col. 19, Lines 29-31).

9.   Regarding claim 8, Borella *et al.* disclose

each sampling period is a predetermined period of time (*sampling rate may have*

a constant period, Col. 18, Lines 12-14).

10.   Regarding claims 9 and 22, Borella *et al.* disclose

setting the threshold at a value during an initial sampling period (*buffers have*

associated buffer values, Col. 15, Lines 37-42).

11.   Regarding claims 12 and 25, Borella *et al.* further disclose

repeating the measuring, calculating and resulting steps during each sampling

period (*buffers are periodically evaluated and selected*, Col. 15, Lines 57-67).

12.   Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* and further in view of

Anandakumar *et al.* (US Patent 6,801,532).

13.   Regarding claims 3 and 16, the combined teachings of Borella *et al.* and Harris *et al.* do not explicitly disclose, but Anandakumar *et al.* do disclose

each end packet includes an end flag (*talkspurt flag or silence flag*, Col. 50, Lines 49-54).

Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the combined teachings of Borella *et al.* and Harris *et al.* with having each end packet include an end flag as taught by Anandakumar *et al.* in order to facilitate the buffering process by positively identifying speech packets.

14.   Claims 10-11 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* (US Patent 6,665,283) and further in view of Orleth *et al.* (US Patent 5,872,789).

15.   Regarding claims 10 and 23, the combined teachings of Borella *et al.* and Harris *et al.* do not explicitly disclose, but Orleth *et al.* do disclose
        determining an average jitter time between at least some of the packets in the sample period (Col. 1, Lines 47-57);
        the adjusted threshold time equaling at least the average jitter time (*cells are read at the average value of the jitter that has occurred*, Col. 2, Lines 37-43).

Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the combined teachings of Borella *et al.* and Harris *et al.* with determining an average jitter time between at least some of the packets in the sample period and the adjusted threshold time equaling at least the average jitter time, as taught by Orleth *et al.*, since Orleth *et al.* teach that processing the packets in this manner reduces jitter (Col. 1, Lines 55-56).

16.   Regarding claims 11 and 24, the combined teachings of Borella *et al.* and Harris *et al.* do not explicitly disclose, but Orleth *et al.* do disclose

the adjusted threshold time equals more than the average jitter time (correction quantity is added to the average result, Col. 2, Lines 4-9).

Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the combined teachings of Borella *et al.* and Harris *et al.* with having the adjusted threshold time equal more than the average jitter time, as taught by Orleth *et al.*, since this is associated with the successful compensation of probable rounding errors during processing of the packets, as taught by Orleth *et al.* (Col. 2, Lines 10-13).

17.   Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* (US Patent 6,665,283)

and further in view of Schuster *et al.* (US Patent 6,360,271).

        The combined teachings of Borella *et al.* and Harris *et al.* do not disclose but

Schuster *et al.* do disclose

        after detecting when a burst has ended, waiting for at least a predetermined

minimal silent period before playing subsequent packets (*establish a predetermined*

transmission time and delay packet play-out, Col. 10, Lines 14-23).

        Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the combined teachings of Borella *et al.* and Harris

et al. with after detecting when a burst has ended and waiting for at least a

predetermined minimal silent period before playing subsequent packets, as taught by

Schuster *et al.*, in order to minimize jitter, as further taught by Schuster *et al.* (Col. 10,

Lines 12-14).

Conclusion

18.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee *et al.* (US Patent 6,782,363) disclose a method of performing endpoint and start point detection is speech processing.

Kurittu *et al.* (US 2004/0120309) disclose a method for dynamically changing the size of a jitter buffer.

Abbott *et al.* (US Patent 6,141,324) disclose a method in which a buffer size is adjusted to overcome a latency prediction.
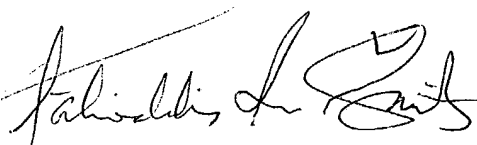
19.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (703) 605-4377. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached on (703) 305-9508. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

MR 11/26/2004

TALIVALDIS IVARS ŠMITS
PRIMARY EXAMINER